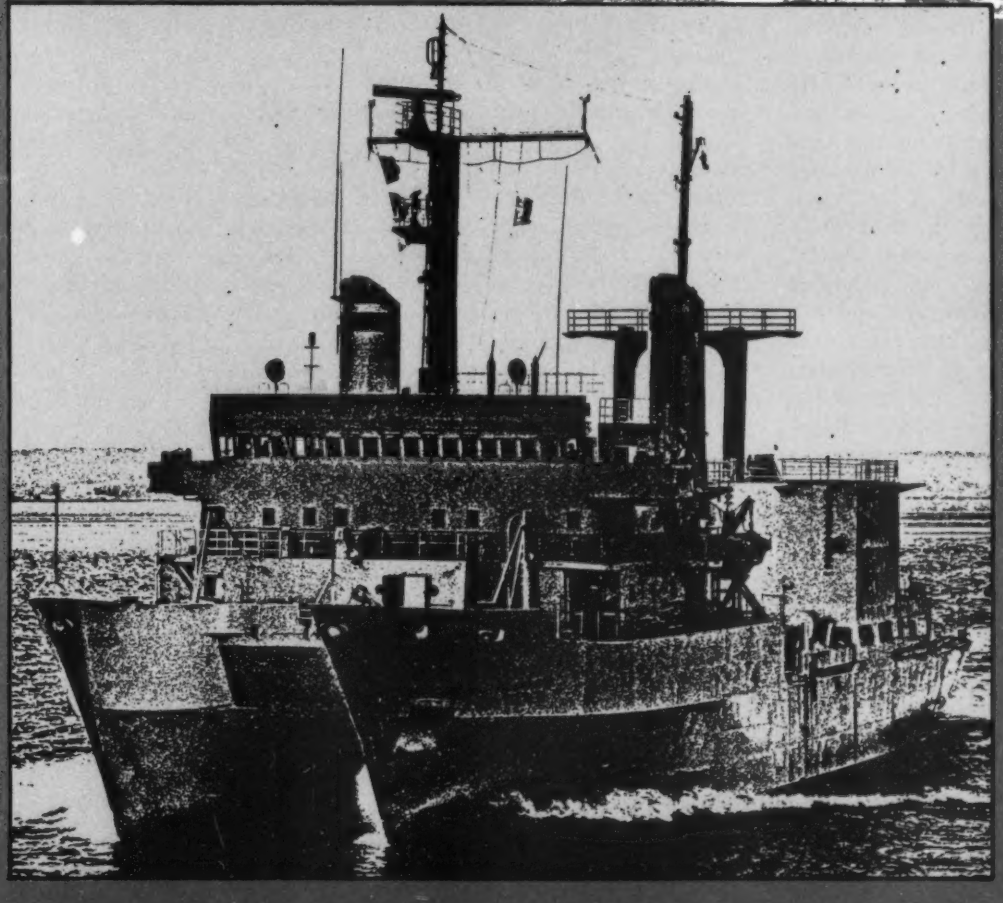
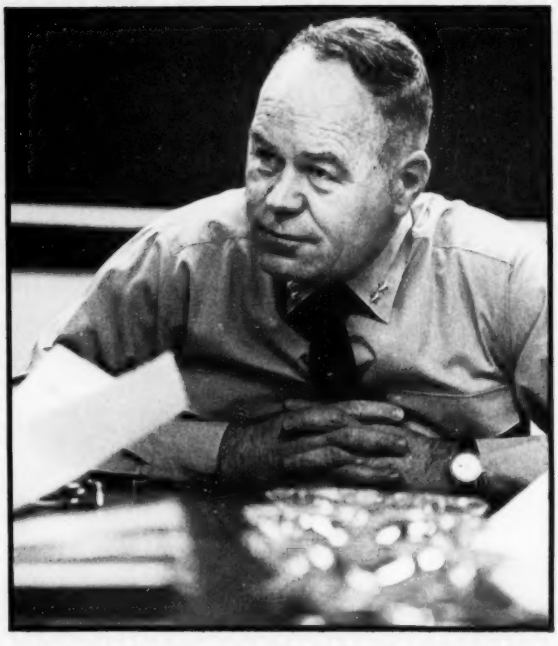
SEALIFT

U. S. NAVY... PAST AND PRESENT



OCTOBER 1973

Arctic notes



I recently returned from my annual Arctic inspection trip coupled with liaison visits to Army commands in Germany, and the Sixth Fleet in the Mediterranean. As always, I was impressed by the expertise and dedication of MSC personnel, ashore and afloat. In the Arctic I was struck by the close working relationship between our Air Force customer, the Canadian and Danish authorities and our own people; in Germany by the obvious concern with contingency aspects of sealift and the enthusiastic acceptance of barge ships; and in the Mediterranean, where I had the privilege and pleasure of calling on Sixth Fleet commander Vice Adm. Dan Murphy, by both the willingness of the Sixth Fleet to experiment with MSC fleet support and by unique problems that need to be overcome before Marias deploys next spring.

In Sondrestrom we were hosted on board Mirfak with Capt. Leyman Couch. The ship and the master both enjoy an enviable reputation in the Arctic. Having flown over Dye 4 on the East Coast of Greenland, I am certain that any mariners who sail in that area are real seamen.

Hayes with Captain Jaque Crampon was in Rejayvik. We saw her at the pier and she looked fine indeed. Apparently the foil added in her last yard period is proving to be a help. Harkness with Capt. Ernest McCoy was alongside Cascade in Naples. We had a quick tour on board and she is a credit to the master, the crew, and to MSC.

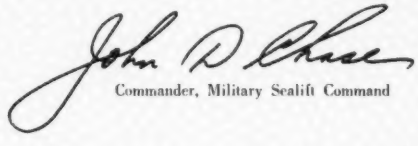
Skeptics of our mariners' ability only need to go on board to gain a better understanding of what we can do for the Navy. I also saw Schuylkill in Hamilton Inlet off Goose Bay and Millicoma at the pier in Bermuda—both from the airplane. Ashore Capt. Herman Fritzke, Capt. John Kearney, Cmdr. Wally Schwartz, Jim Smith, Cmdr. John Arens, Lt. Ken Fitzgerald, Lt. Cmdr. Paul Hunt from Rotterdam, Lt. Col. Robert Hayes of the ATTU Piraeus, Capt. Richard Holbert of Rota, Lt. Col. James Pugmire of the ATTU Cadiz and Capt. Joe Lasseter in Kenitra all were most hospitable and helpful.

This is also an appropriate time to wish all hands a happy Navy and MSC anniversary. This is Navy's 198th anniversary and the 24th for MSC. Since our establishment 24 years ago in October 1949, MSC has been actively involved in military operations, starting almost immediately with support of the Berlin Airlift. In those 24 years our ships have served around the world and have participated in every U.S. military crisis situation.

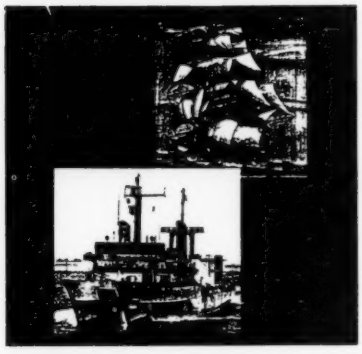
Among them are the Berlin Airlift, the Korean Crisis and emergencies which required troop deployments to the Congo and to Lebanon. Vietnam also is included on the list as is the Quemoy Matsu crisis, the sealift of Chinese POWs from Korea to Formosa in 1954, a similar move of Hungarian refugees to the United States in 1956, and evacuation of U.S. families from Guantanamo Bay in 1962.

MSC can well be proud of our contributions to our Navy and to our country. As Admiral Zumwalt has pointed out, "The Navy family derives its strength from all of its members working in harmony for a common purpose." We are proud of that family and make a clear contribution to that strength.

Happy anniversary.



Commander, Military Sealift Command



COVER: October 1973 marks the Navy's 198th year of progress. Cover design by Lynn O'Connor.

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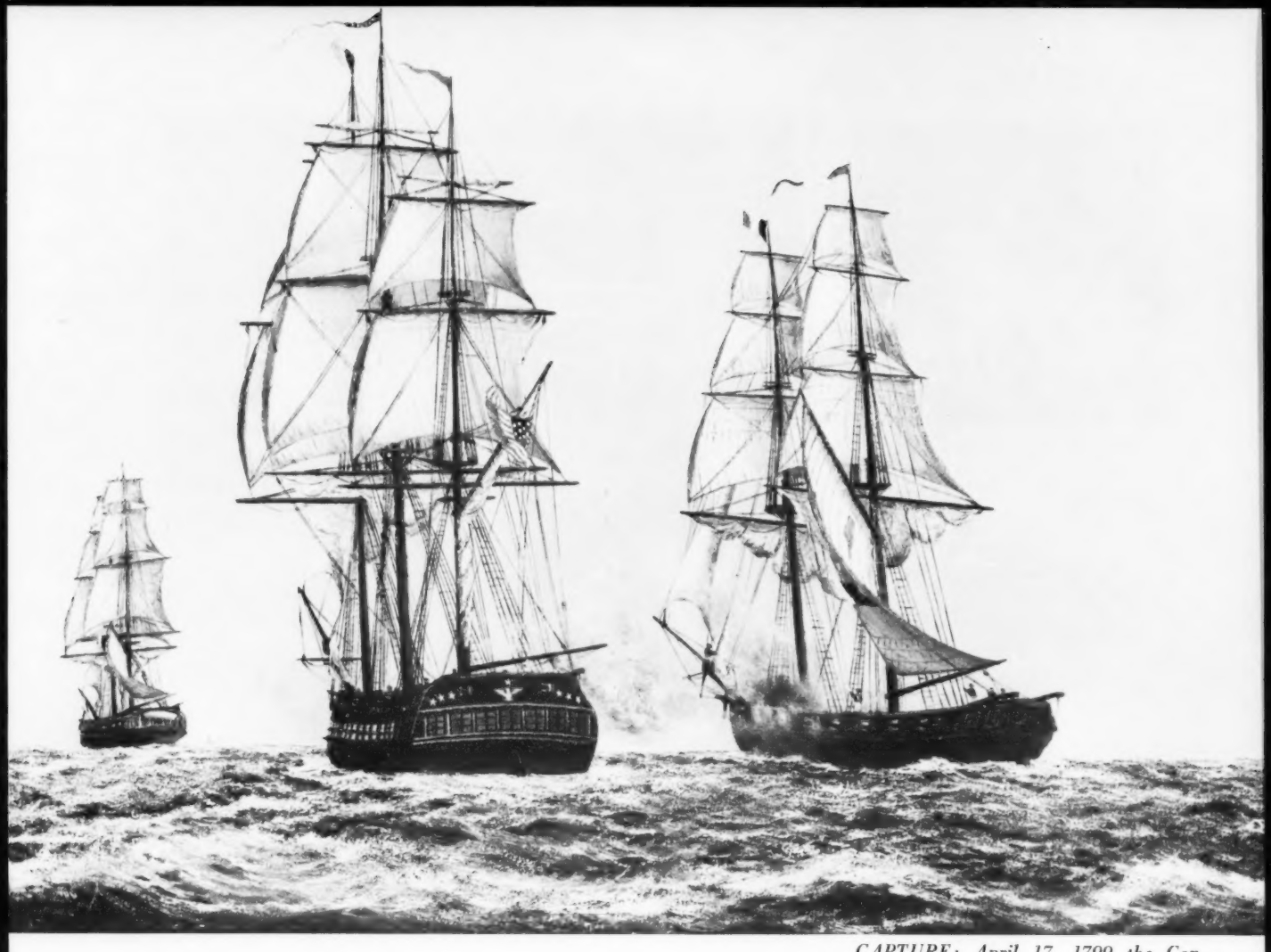


CAPTURE: April 17, 1799 the Constellation captured two French privateers. The artist was Arthur N. Disney, Sr. (U.S. Navy Photo)

198th birthday of the United States Navy is in

A Family Tradition

by

Ed Nurenberg

October 13, 1973 marks the 198th year that the U.S. Navy has been in business, and according to Admiral Elmo R. Zumwalt Jr., Chief of Naval Operations, "It's a family business."

In a recent letter to commanding officers of ships and stations throughout the world, he said, "Our history points out the deeds of Navy men and women which have inspired succeeding generations and created proud traditions. An essential element of those traditions has been the role of the entire Navy community—the Navy family—in support of the Navy's mission. Indeed, the combined achievements of the Navy family—active duty

IRON CLAD: Captain John L. Worden is seated on the deck of the USS Monitor, the Navy's first iron ship built to oppose the CSS Merimac during the Civil War. (U.S. Navy Photo)

personnel, dependents, Navy civilians, reservists and retirees—have shaped the enduring character of the naval service."

If there is a key word to describe the nature of yesterday's and today's Navy it is "teamwork"—and that's why the theme selected for Navy's 198th anniversary is Navy Birthday—A Family Tradition.

In 1775 the idea of freedom was beginning to spread through the 13 colonies and the Continental Congress ordered the first outfitting of ships on October 13th. Though ill-equipped and undermanned, the early Navy relied on spirit and tenacity to overcome overwhelming odds and defeat the British naval forces.

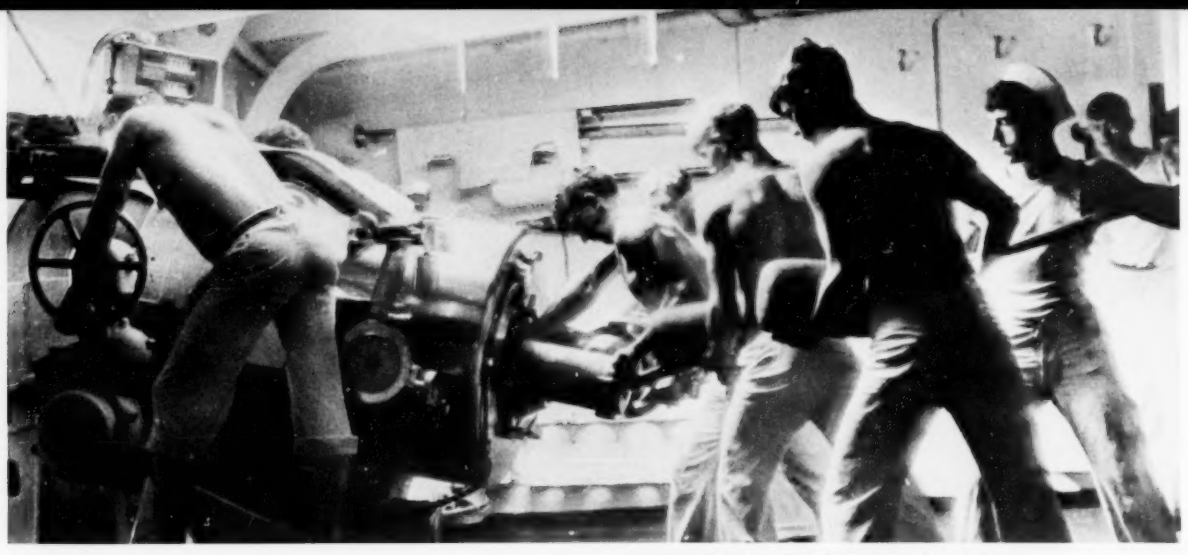
It is impossible to recount all the inspiring and outstanding feats of American Navy men during the War for Independence, for not only was a Navy being built, but an entire country was in the process of being born.

The critical need for a Navy in peacetime as well as during war was quickly driven home to Americans after the Revolution. Although the sea had already played a decisive role in their destiny, the young United States sold its last Navy ship in 1785. She hoped for good will and amity of world powers. She got indignities, loss, humiliation and contempt.

As the United States grew, her merchant ships ranged the world carrying on a foreign trade which had become the nation's economic lifeblood. But, without protection from a Navy, merchant seamen were impressed, cargoes confiscated, and ships captured.

So the United States, born of the sea, had to rebuild a Navy to avoid humiliation and to forestall large financial losses. In 1794 Congress authorized six frigates

LEARNING THE ROPES: Apprentice seamen aboard USS Atlanta in 1887. (U.S. Navy Photo)



BATTLESHIP PRACTICE: Loading a six-inch gun in 1909.
(U.S. Navy Photo)

that would become the keel of the new Navy. Two of these first ships built in the 1790s, Constellation and Constitution, are still afloat.

After the War of 1812, the United States Navy became even more vital as the seagoing guardian of vessels carrying an expanding American trade.

A spectacular success of the U.S. Navy was the opening of Japan. In 1854, with a force of seven ships, Commodore Matthew C. Perry obtained treaty rights for American traders to call at Hakodadi and Shimoda. Thus, United States seapower not only opened new trade routes for U.S. commerce but also opened isolated, feudal Japan to the outside world.

In the decades following the Civil War, the United States was beginning to build its "iron fleet." After the Spanish-American War, President Theodore Roosevelt beefed up the Navy in the Caribbean. Each year he asked Congress to increase naval power. In 1905, ten new battleships were added and, by 1910, the size of the Navy fleet had doubled.

From 1907 through 1909, President Roosevelt sent his Great White Fleet on a world cruise as a display of U.S. naval strength.

After helping win World War I, the next major operations of the U.S. Navy to promote peace came in the Mediterranean-Middle East and Far East. Under Admiral Mark L. Bristol in the Mediterranean, the Navy continued to fulfill its vital mission, providing effective support of U.S. diplomacy to limit trouble, assisting the distressed and promoting freedom.

On Dec. 7, 1941 world peace was shattered by the Japanese attack on Pearl Harbor. Staggered but grimly determined and still powerful, the Navy raised most of the battered ships, added new vessels, and for the next four years roamed the vast oceans of the world in pursuit of total victory.

When the USS Missouri entered Tokyo Bay to receive Japan's surrender, the war came to an official end. It also marked the end of one more chapter in naval history. From John Paul Jones to Admiral Chester Nimitz, the United States Navy had served the cause of world peace and national security.

LATEST: USNS Hayes, MSC's twin hulled oceanographic research ship was commissioned in 1971.

By 1950, the 20th century had spawned many small and two of the bloodiest wars recorded in the annals of man—Korea and Vietnam. The U.S. Seventh Fleet in the Far East continued the tradition of showing the flag which began in those waters long ago. Since 1800, scarcely a decade has gone by in which the nation's warship have not had to respond to a crisis in the Pacific endangering our sovereignty and the freedom of man.

"The Navy," said Admiral Zumwalt, "is proud of its tradition and the past role it has played in the defense and in the shaping of our nation. It is equally proud of its people past and present, who have responded when their assignments called for something extra in performance and responsibility." □

For hundreds of years bottles have been drifting the world's oceans with messages of hope, tragedy and peace. Today, bottles carry on public relations, talk and conduct scientific experiments.

Evolution of the drift bottle

by
Louis Granger

Fragile bottles, drifting with wind and tide, containing messages of tragedy, hope and mystery, have their own special niche in the lore of the sea.

Thousands of bottles drifting in the oceans today are aiding oceanographers in unraveling a few of the mysteries of the seas.

Bottles have been entrusted to the seas for centuries for one intriguing reason or another. Marriages have been arranged, tragedies disclosed, fishing grounds charted and currents measured.

The Maryland Port Administration already has a "bottled" public relations program and the Woods Hole Oceanographic Institute now is launching a "talking bottle" project.

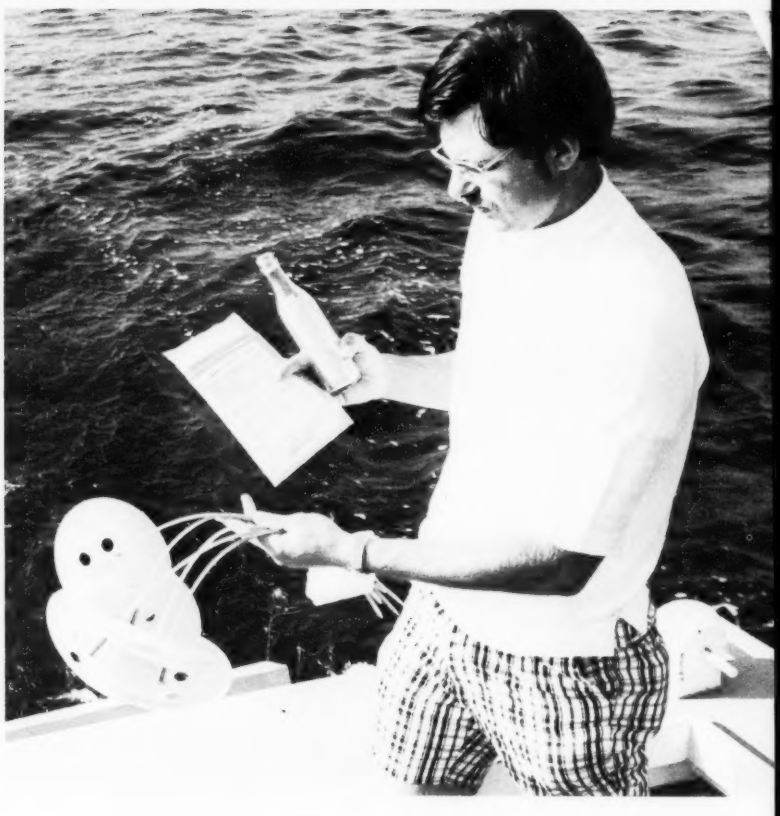
The Woods Hole institute in Massachusetts last year completed a 12-year continental shelf water circulation study that took in an area from Cape Sable at the south end of Nova Scotia to Miami, Fla. One purpose was to determine residual drifts of such things as fish eggs and larvae which are of vital interest to East Coast fishermen. The study also considered the path and likely resting place of floating material such as soil and debris.

Approximately 165,000, eight-ounce soda bottles were launched, mostly from Coast Guard planes, some 600 feet off shore. About 16,000 bottles were recovered from beaches and marsh areas along the coast and 1/10 of 1 per cent from European coasts, said Dean Bumpus, Woods Hole senior scientist.

Each bottle carried a bright orange message printed on a postage paid data card asking the finder to record time, date and the location the bottle was found. Persons who returned the cards were given a 50-cent reward plus a thank you letter and a map showing where the drift bottles were released.

Although each bottle was weighted with sand so that just the corked neck portion protruded above the water's surface, easterly winter winds pushed many of the bottles seaward.

Normandeau Associates of Manchester, N.H. also is



DRIFTERS: Allan D. Hartwell, oceanographer for Normandeau Associates, holds three types of drifters used to trace water circulation patterns along the New Hampshire coast.

involved with drift bottles for a nuclear power plant study at Seabrook, N.H. Normandeau is an ecological consulting and environmental research firm and began its project about a year ago in cooperation with Woods Hole.

Allan D. Hartwell, oceanographer and project director, for Normandeau, said polyethylene drift envelopes and plastic, umbrella-shaped sea-bed drifters as well as bottles were released at locations as much as 25 miles off the New Hampshire coast to study water circulation patterns.

The envelopes float on the surface and follow surface currents and winds. The sea-bed drifters, as the name implies, move along the bottom with underwater currents.

The plastic drifters resemble miniature yellow umbrellas with red handles and are marked with instructions to the finder.

Mr. Hartwell said more than 3,000 drifters were released during the first year of the program. "We've had excellent results," he said. Nearly 20 per cent have been returned."

In general, the bottles moved south along the coast to Massachusetts. Many were found on the outer cape and some drifted to the southern part of Buzzards Bay, R.I.

One was discovered on a beach at Newburyport, Mass. by Raymond L. Smith, also of Newburyport, and his family. Mr. Smith sent the card in and a note telling how he had already spent the 50 cents.

1. Damage to my know-it-all wife's pride who said card would come out without breaking bottle	.25
2. Broken pencil	.10
3. Bandaid for my know-it-all 10-year-old girl	.05
4. Stamp and envelope to salvage what was left after their efforts	.10
	.50¢

Another lucky, albeit frustrated, finder was James F. Vaughn, Jr. of Salisbury, Mass. Mr. Vaughn wrote Woods Hole saying, "Perhaps there is some way to unlock the puzzle of how to get the card out of the bottle, but we didn't discover it. The nasty thing formed a cone at the top and gave us all kinds of resistance, so begrudgingly, we gave up and did what any simple minded individual would do—broke the bottle! If you have a better way, we are most anxious to be educated."

Both Mr. Hartwell and Mr. Bumpus agreed that drift bottles reveal few secrets about their travels.

"We know where they are released and where found, but we know nothing of their travels in between," said Mr. Hartwell.

"It's a pretty simple and unsophisticated method," said Mr. Bumpus. "The bottles must be recovered to tell us

anything. And if they don't come back we have the feeling that they are not going ashore at all.

"If we launch bottles off the New Jersey coast they should land between Wallops Island (Florida) and Cape Hatteras (N.C.) in about a month. In winter they will not strand at all, but will turn off at the Gulf Stream and either grow barnacles and sink or head off to Ireland."

"We've gotten to the point where launching more drift bottles off the East Coast isn't going to improve our knowledge. We don't know the bottles' movements and now we need more details."

"The talking bottles will give us a biography and tell us about their wanderings," Mr. Bumpus said.

The production of a prototype "bottle" is expected in December. They will not be made of glass, however, nor will they be small.

Expected to weigh 200 to 300 pounds each, the bottles will be made of something sturdier than glass, and be more like floating buoys with very low frequency radios for vocal cords. They will report their movements every two hours to shore radio receivers spotted at various oceanographic sites.

"These talking bottles will tell exactly what route they are following between the time they are dropped overboard from a Woods Hole vessel to the time they are recovered," said Mr. Bumpus.

A one-year pilot study using about two dozen of these big drifters will cost $95,000 and will be financed by the National Science Foundation.

Talking bottles are not new to the world of drifters however.

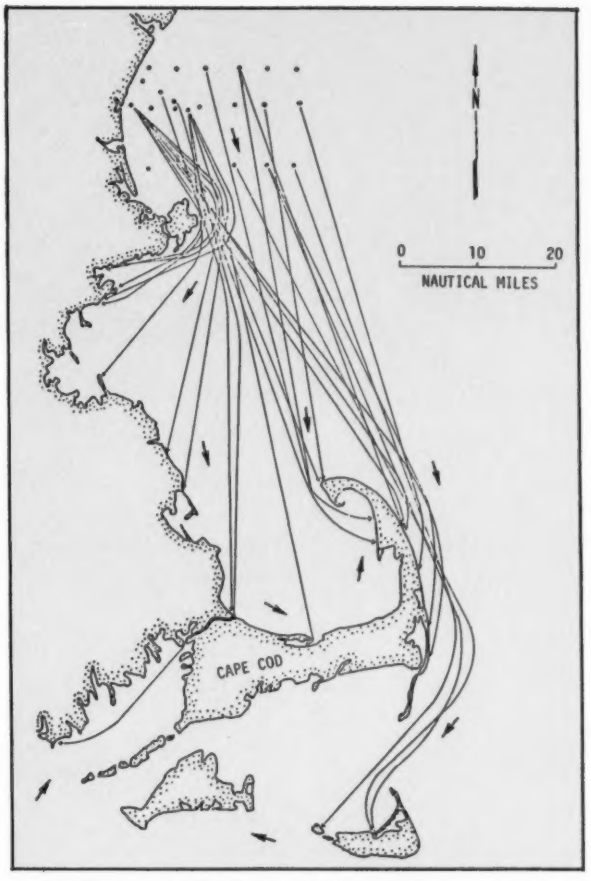
When the Nimbus III satellite was launched in 1969 it tracked five of the drifting talkers which had been placed on ice floes in the Arctic. Each time the Nimbus passed over it triggered an interrogation, recording and location system in each buoy. The buoy gave Nimbus such information as water temperature, current direction and velocity, and its own location.

Nimbus recorded the information on tape which was then transferred to tracker stations such as the USNS Vanguard, now stationed in Mar del Plata, Argentina. All information eventually was stored in a computer enabling oceanographers to analyze biographies of the Arctic travelers.

Nimbus continued its tracking until it died in 1972. But, Nimbus IV, sent aloft in 1970, still tracks the talking bottles.

The Maryland Port Administration's bottled public relations program started in 1960 during world trade week. The idea was to give message bottles to ships visiting Baltimore to be cast overboard when the ships were at sea. Each captain was asked to send a note to the port administration marking the date and location of the ship when the bottle was dropped.

The message, written in English, French, German, and Spanish, asked the finder to notify the port giving the location and details of discovery. The port rewarded the finder with a note of thanks and a small gift, and then notified the captain. Thus a lasting bond of good will was created.



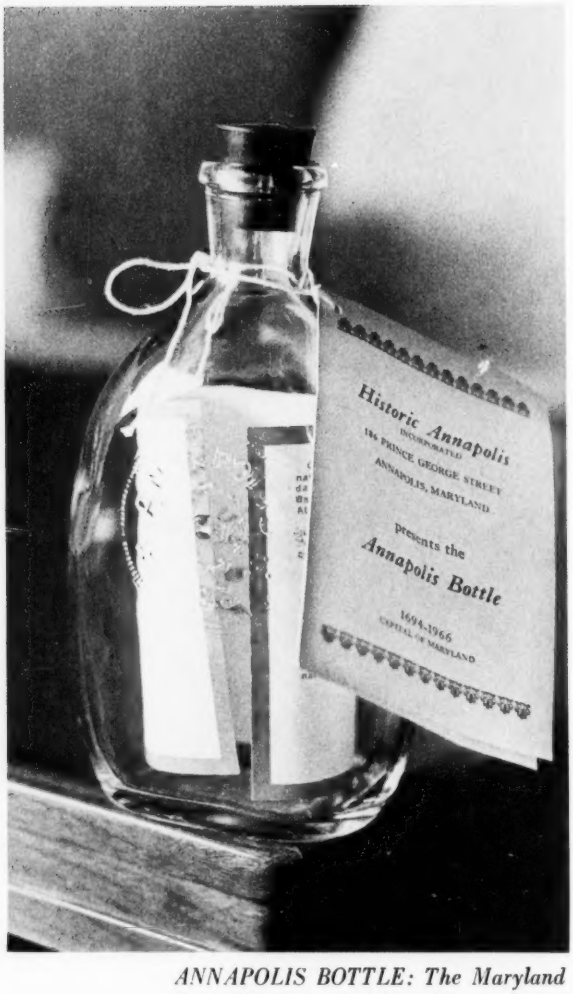
BOTTLE ROUTES: Circulation of Massachusetts coastal waters is deduced from drift bottles recovered south of Cape Ann. Lines show their probable routes.

Results were so effective that the presentation was adopted for the port's maiden voyage program which calls for an informal welcoming by state and local maritime officials for each ship visiting the port for the first time.

Approximately 50 of the more than 200 bottles given to ships by the port group have been found.

The first was discovered by a Dutch carpenter near a spit of land adjacent to the Zuider Zee. Others have been picked up along the coasts of Bermuda, the Bahamas, France, Ireland, Scotland and Panama.

The Maryland bottle which holds the distance record turned up in 1966, having been tossed overboard in



ANNAPOLIS BOTTLE: The Maryland Port Administration uses this carrier in its "bottled" public relations program.

1960 from a ship originally named P&T Builder. That message bottle started its journey off the west coast of Costa Rica and drifted 5,300 miles to the Philippines where it was discovered by Restituto D. Torres.

In 1967 the Baltimore port group changed bottles. The original one was an ordinary 8-ounce glass bottle with a rubber stopper. The bottle now used is a copy of the soda lime clear glass pink flask made by John Frederick Amelung in Frederick County, Md., who established his glass works in 1784. One side is a bas-relief copy of a silver shilling originally coined in 1783 by John Chalmers, silversmith and inn keeper in Annapolis, Md.

A thousand of the reproduction flasks were originally made for Historic Annapolis Inc., a group interested in the preservation of colonial Annapolis. They were donated by the Carr Lowrey Glass Co. in Baltimore which then destroyed the mold. The port administration bought its last batch of 72 in 1970. Only a dozen are left. So far none of the Annapolis bottles have been found.

The oldest known message bottle was tossed into the Pacific Ocean in 1784 by Matsuyuma, a shipwrecked Japanese whose vessel had struck a reef. Before he died he carved on a small piece of wood an account of the tragedy and sealed it in a bottle. It was found nearly 150 years later on a Japanese beach.

A Swedish sailor named Ake Viking began a courtship with an Italian girl through bottled mail. In 1956 he posted into the sea a proposal of marriage for any pretty girl to answer. The bottle drifted to Sicily two years later and was found by a fisherman who gave it to his daughter. After corresponding for awhile, the sailor and the girl married.

Two drift bottles solved a maritime mystery involving the disappearance of the SS Huronian in 1917. A widespread search was carried out for the vessel but no trace of her was found until five months later. A Nova Scotia beachcomber found a bottle that contained a handwritten message: "Huronian turned turtle in Atlantic Sunday night. Fourteen of us in a boat."

The note was unsigned and at first it was thought to be a hoax. But five years later a second message bottle was found on the Irish coast. This one was signed by Charlie McFell, greaser. He said, "Huronian sinking fast. Top-heavy, one side awash. Goodbye mother and sister." McFell was known to be a member of the crew and the mystery was declared officially solved.

Another bottle took seven years to drift from an island near Savannah, Ga., to a Florida beach on the Gulf of Mexico only 830 miles away.

The bottle was tossed into the Atlantic off Wassaw Island by a group of Explorer Scouts in June 1962, and was discovered on Ft. Myers Beach, Fla. in July 1969, by Don B. Howard of Ft. Myers. The bottle contained the names of the Scouts.

Mr. Howard asked oceanographers at the Commerce Department's Environmental Science Services Administration if they could determine the route the bottle could have taken.

A number of routes were possible, they said, adding that it was actually impossible to track the route or estimate the number of miles it might have traveled.

In any case, the bottle would have been taken along by the Gulf Stream and could have traveled at two to four miles an hour up the coast to Cape Hatteras where it would move easterly until it was caught by the Canary Current. This current would carry it southward down the bulge of Africa to the North Equatorial Current which would transport it westward into the Caribbean. The Caribbean Current would then convey the bottle to the Yucatan Channel where it would pass into the Gulf of Mexico and finally to the Ft. Myers beach.

Another longer route would take it across the Atlantic

Merchant mariners aboard Military Sealift Command ships have from time to time cast message bottles into the sea. One incident occurred Sept. 25, 1963 and ended 2,300 miles later on Aug. 30, 1964.

Lt. Cecil Harper, Jr., chaplain aboard the former USNS Darby (now part of the reserve fleet), placed a note in a bottle and tossed it overboard about 400 miles east of Newfoundland. The note, in six languages, stated:

"O thou river of miracles which is in each and every one of us, pour thy healing waters of compassion upon the wounded body of humanity, and make man whole. Peace."

Eleven months and five days later, the bottle was plucked from the ocean a few feet off the coast of Scotland by 12-year-old Alexander Mair of Banffshire.

"My first thought when I picked up the bottle was to wonder where it had come from and who had sent it," he wrote in a letter to Chaplain Harper.

Young Mair followed up by sending Chaplain Harper a picture postcard of the beach with an "X" marking the spot where he found the bottle. He noted that the bottle had leaked. The note, Mair said, "was very wet and I had to dry it."

"I found it when I was walking along the shore and noticed it floating in the water," the lad wrote.

The bottle apparently drifted in a northeasterly direction and then was picked up by a southerly current. Presumably, it was about to beach on the northeast coast of Scotland on the North Sea.

and down the west coast of North Africa where it would be caught up in the Guinea Current and carried south of the African bulge to the South Equatorial Current. This would then have transported the bottle across the Atlantic and northwestward along the hump of South America into the Caribbean where it would follow the course previously outlined.

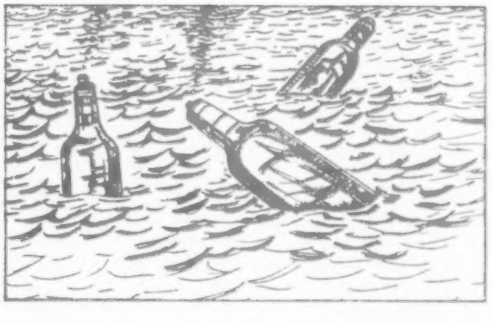
Drift bottles helped save the lives of many seamen just after World War II.

Following the war, hundreds of Japanese mines adrift in the Pacific played havoc with merchant shipping. Bottle studies helped plot the routes the mines took and information obtained enabled navigators to re-route ships to avoid the dangerous mines.

These small humble ocean voyagers have even brought riches to their finders. A farm boy in the Azores discovered a bottle containing a note which promised to pay the finder $1,000. The boy collected his reward from a radio station sponsor who had thrown the bottle into the Atlantic at the entrance to New York harbor as a publicity stunt.

Wealthy cruise passengers, have been known to throw reward bottles into the oceans, particularly in the Caribbean.

Bottles that once held expensive wines, gin and even ketchup have been cast into the oceans by the thousands carrying diverse messages of hope and tragedy. □



What's the fastest and most economical ship to move cargo?

Ask the Computer

by
Linda McDaniel

Computers often may be blamed for foul-ups in billing and multiple mailings, but an automated procedure for conducting a pre-voyage analysis has improved MSC's ship scheduling and provides current information which allows better decision making by staff members.

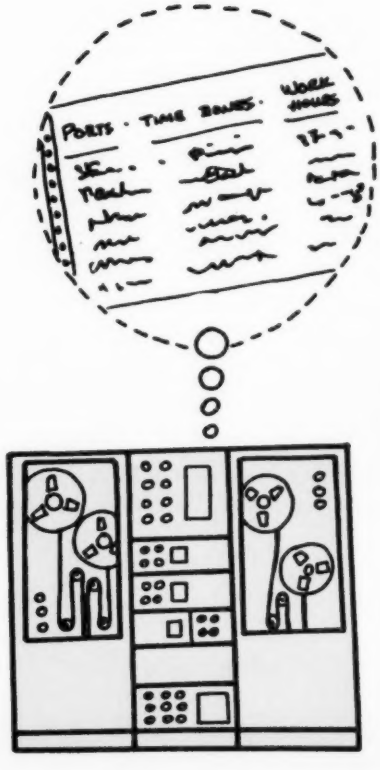
Pre-voyage analyses, PROFORMAS in the military vernacular, are conducted at the request of MSC's area commands when cargo is booked on MSC controlled fleet ships.

A teletype terminal at MSC headquarters, connected to a computer at Naval Weapons Laboratory in Dahlgren, Va., has been operational since September 1972. In a matter of minutes, the computer can print out current pre-voyage analyses which are used to determine the dry cargo ship best able to move the cargo in terms of cost, time, and type of cargo to be sealifted. In essence, the computer gives a fairly accurate picture of the movement even before the ship leaves port.

Prior to the development of the computer program, MSC's requirement, analysis and procedures branch made pre-voyage analyses by manual calculations and researching numerous written records. Based on data compiled from similar cargo lifts, and their own experience, the division's staff would determine the average speed of available ships, estimate the number of miles between ports of call, and predict the days required for loading and discharging cargo to work up a pre-voyage analysis. At best, they were very rough estimates, involving many hours of work.

The computer now keeps needed information on file. Retrieval requires only pushing a few buttons.

Via the teletype machine, the computer is supplied with the names of available ships, type and amount of cargo



scheduled to be lifted and date the cargo is to be loaded; a task easily done by a typist.

Among other things, the computer stores a comprehensive bank of data on all ports of the world. Information concerning the time zones that ports are located in and the distances between ports also is stored in the computer. Even data on various ports' working hours and how fast specific ports can handle different types of cargo can be obtained from the computer.

It also banks information on ships, such as how long it would take a specific ship to complete a voyage and the loading and discharging rates for different classes of vessels.

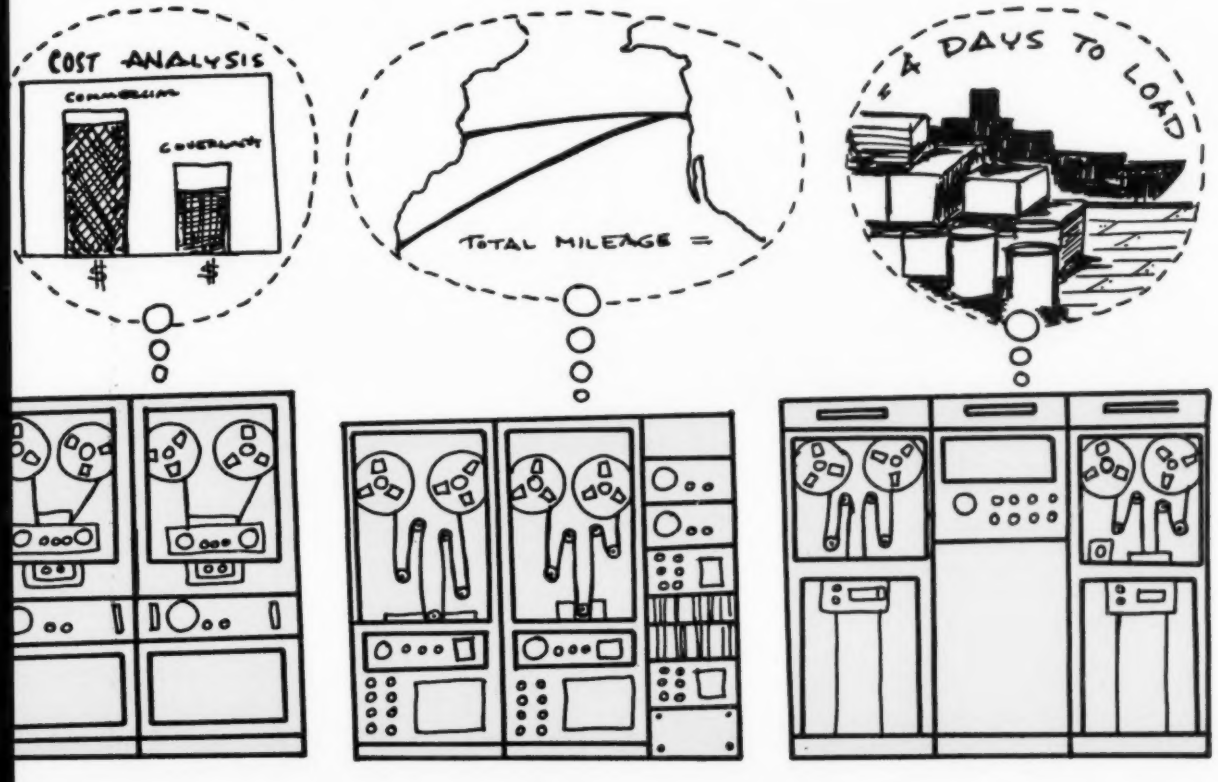
The computer enables ship voyages to be analyzed beforehand. Variations in pre-planned voyages and options associated with ship usage also can be considered. For instance, if a ship is costing money at the end of an outbound voyage, the computer can quickly calculate how much income must be generated per day to break-even financially on the inbound voyage. Again, if a ship is in a profit earning situation, the computer immediately determines how many days a ship can be delayed and still break-even.

In addition, commercial cost data can be generated for comparison with the rate MSC charges the shipper services since the computer data bank contains a current MSC billing rate table.

Currently, MSC headquarters forwards information obtained from the computer at Naval Weapons Laboratory to the area commands via message or letter. Plans are, however, to transmit information by teletype machine which is both cheaper and faster. Data can be transmitted to an area command by teletype at 100 words a minute.

The computer also stores information used in various headquarters studies, such as those made to determine feasibility of changing MSC's mid-Pacific island support service by replacing the USNS O'Brien with USNS Comet, which was operating in MSC's Eastern Atlantic and Mediterranean area. Conclusions resulting from these studies indicate that dollars could be saved, and more efficient transportation provided by replacing the O'Brien with the Comet.

Better management is vitally important to the command in view of declining worldwide requirements which have demanded restructuring of the MSC fleet. With fewer ships, which are both more costly and productive, MSC must utilize each vessel to the fullest extent. The computer provides valuable assistance in that effort. □



Delivering supplies to Vietnam was a hazardous job. Merchant mariners often felt the wrath of war.

Battle report

by
Howard Rosenberg

IN YOKOHAMA: USNS LST 607 is prepared for a voyage to Vietnam. She was sabotaged in 1967 while conducting routine operations.

The first day of May in 1964 was windy and wet along the Saigon River. In fact, all Southeast Asia was engulfed by southwesterly monsoons that had begun a couple of weeks earlier. The squall transformed the warm rain into hot needles as they slapped against the faces of the crewmen aboard USNS Card.

The Card, a baby aircraft carrier, was inching her way toward a berth in Saigon Harbor to unload her cargo. Unexpectedly, a staggering blast shook the vessel and the groan of tearing steel made the howling monsoon seem only a whisper. The Card had hit a mine and the startled crew was forced to man lifeboats and watch as their ship sunk slowly into a murky whirlpool.

The terrifying experience of the civilian crewmen aboard the Card was shared by hundreds of merchant mariners before the Vietnam ceasefire nearly nine years later. Miraculously, none of the Card's crewmen were injured. Crewmen on other merchant ships were not as lucky.

Between May of 1964 and November of 1972, there were 138 enemy actions against Military Sealift Command nucleus fleet and chartered ships. Sixteen men were killed and forty-five were wounded.

Enemy attacks varied from a lone sniper firing from a river bank to raids by aircraft. Damage ranged from the total loss of five ships to bullet holes in a lifeboat of another. Besides the Card, ships lost included the SS Baton Rouge Victory, sunk by a mine; an AB&T barge due to an underwater explosion; the American Hawk and the Green Bay, both of which exploded.

Some ships were often the target of enemy attacks. Seatrain's Transglobe was attacked five different times. She was fired on three times from shore as the sharp ping of small-arms fire echoed through the passageways, and twice was hit by rocket fire. During one small arms attack, one man was killed and another wounded.

Without any protective armament, guns or rockets, all defenseless merchant ship crews could do was to batten

down the hatches, take evasive action if there was room to move, hope for the best, and pray.

Seventeen ships were mined during the conflict. Another method popular with the enemy was harrassing passing ships with small arms fire and hammering them with rockets launched from shore.

Sabotage was common. MSC's USNS LST 550 was rocked by a time bomb explosion in 1965. In 1967, USNS LST 607 was sabotaged and the SS Seatrain Texas was mined. The props of the Glory of the Seas and the SS Sagamore Hills were damaged in DaNang harbor within days of each other. The list goes on.

The enemy used small bore rifles, recoiless rifles, mines, rockets, missiles, automatic weapons, time bombs and explosive charges. Anything at the disposal of the enemy was used to try to stop the constant flow of cargo to Vietnam.

Often the crews had to face equally real and terrifying dangers long before they entered Vietnamese waters. Typical was the ordeal of the SS Badger State.

Bombs carried in the ship broke loose during a severe

AIRCRAFT CARRIER: USNS Card was sunk in the Saigon River after a mine ripped a hole in her bottom.

REPAIRS: Standing in ankle-deep water, an MSC engineer shores up a hole in the bulkhead.

LAZARUS: After Card was raised from the bottom of Saigon River her engine room was choked with debris and mud.

SALVAGE: After a 3-inch heavy lift wire was placed under the hull, tugs attempt to nudge the Baton Rouge Victory off the Lung Tau River.

storm and ultimately battered huge holes in her side. Her crew fought the rolling bombs and wild seas for several days before evacuating the ship. When they did, more than a score were killed as a huge bomb careened through a hole in the side of the ship and landed in the middle of a lifeboat carrying them away from the Badger State.

Tales of heroism were numerous—on that ship and aboard many others. One man, Boatswain Richard D. Hughes, received a medal for his efforts. But, the 1970 American Merchant Marine Trophy was awarded posthumously for he had drowned. He was too exhausted after several days of leading the fight to secure the loose bombs to reach a lifeboat only yards away.

Despite enemy attacks and the furies unleashed in the broad Pacific Ocean by nature's elements, Defense supplies and equipment reached their destination. The fact that they did is a tribute to the men who manned the ships which delivered them. □

STATOR CONTAINER: A 390-ton generator stator is slung between two sections of the German Schnabel car heading from Switzerland to Hamburg. The stator is inside the container.

Lykes 'generates' power

by
Bob Willsie

Lykes Seabee barge ships are involved in an international move of equipment that will soon help light up much of the United States.

Giant generator components, specially designed railroad cars in both Europe and in the United States, the longest rail car in the world and perhaps the slowest train ride in Germany's history are all involved in the transport of ten 390-ton stators from Switzerland to various sites in the eastern part of the nation.

A stator is the stationary magnetic cylinder in which a shaft is rapidly rotated to produce electricity. Once the stators are in place, generators from Michigan to Alabama will provide power for 36 million persons.

Four already have been moved over a rail-sea-rail transportation network and seven more will be lifted by Lykes to the United States in coming months.

Stewart LeBlanc, vice president (Seabee Division) of the Lykes Brothers Steamship Co., said the initial delivery was the "heaviest single cargo lift we've ever handled."

Lykes moved each stator on the 6,000-mile sea leg of the journey in less than two weeks in a Seabee barge designed for this purpose.

But difficulties in transporting the stators over the much shorter land legs of the trip make this story a veritable "big lift saga."

The stators were manufactured by the Brown Boveri Co., Ltd. at Birrfeld, Switzerland, and transported by rail through Switzerland and Germany to Hamburg where they began the ocean trip to New Orleans.

Two stators have gone by rail to Ohio Power Co.'s Amos Plant at Scary, W. Va, and two to Ohio Power's Gavin Plant near Pomeroy, Ohio.

The railroads must use special cars for these heavy hauls. One in the United States is owned by the Brown

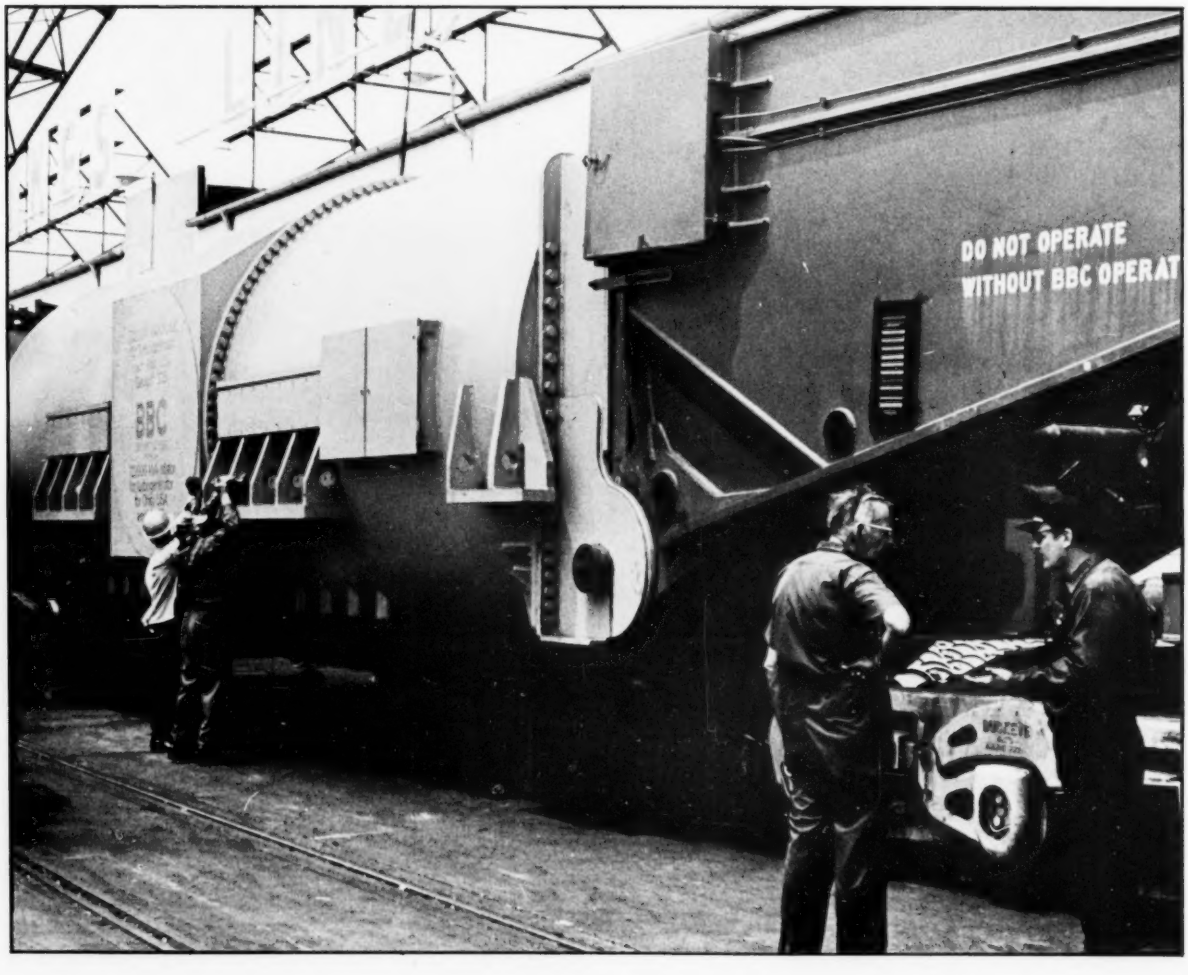
Boveri Corp. of North Brunswick, N.J., and another in Europe by Deutsche Bundesbahn, the West German Railway.

Each unit is actually two cars positioned rigidly like bookends with a stator container slung between. Idea is to position the load over the center part of the elongated car. Large pins keep the whole thing together and hydraulic devices allow the container to be lowered or raised as necessary.

The three-piece assembly looks rather like two birds pulling on opposite ends of a worm. So, the Germans have coined a slang name—Schnabel—which means "the car with bird beaks."

Total length of the Schnabel car in Germany is 213 feet and it rides on 32 axles. An aft car has living accommodations for a team of six transportation specialists. They go along to adjust the load so it will fit through tunnels, to bend signals sideways so that the huge load can pass, and to perform other tasks necessary to move the bulky equipment.

The stateside-based Schnabel car owned by Brown



TIGHTENING UP: Workmen tighten bolts before the stator heads for West Virginia by rail.

Boveri is only 114 feet long with 20 axles and is followed by a caboose carrying at least three transportation specialists. The car alone weighs 212 tons. When not needed, it is sometimes leased under an arrangement jokingly referred to as Rent-a-Schnabel.

The U.S. car was designed and built by Norca Machinery Corp. of New York City. In operation, it requires a trained crew to insure safety of the load. At every curve of 13 degrees or more, the crewmen use hydraulic devices built into the car to move the load horizontally so that it clears obstacles on either side while negotiaing the curve. In many cases, it is necessary to stop the train and then move ahead slowly—with the crewmen shifting the load to slip by obstacles on either side.

The same technique is necessary in tunnels, although these generally require that the load be lifted or lowered rather than moved to one side or the other.

Norca recently designed and built the longest rail car in the world—a 240-foot Swedish Schnabel car.

A reduced pivot, as Norca engineers call it, keeps the Schnabel cars and loads from cutting corners too sharply. It equalizes the clearance needed on each side of the track and results in the least possible cutting of corners, minimum end swing of the load, and equitable weight distribution on the tracks.

The initial Switzerland to Hamburg stator trip, 450 miles as the crow flies, may have been one of the slowest in German rail history. It took more than four weeks.

Detours, some over specially laid track, took the train more than 300 miles out of the way. They were necessary because of the size, dimensions and weight of the cars. While the overland journey in the United States from the port of New Orleans to Memphis to Louisville to Cincinnati to the electric utility plant site required no detours and took only 10 days, load shifting limited the train to a speed less than half that of the Lykes ship on the sea leg of the journey.

Electric plants using the already-delivered four generator stators are part of a holding company, which also functions as the service corporation to the operating companies. American Electric Power Co. is based in New York City. In its fold are seven companies: Ohio Power, Appalachian Power, Indiana and Michigan Electric, Wheeling Electric, Kentucky Power, Kingsport Power, and Michigan Power. Power distribution will go into an integrated transmission system covering a seven-state area including much of Virginia and Tennessee which anticipate increasing industrial commitments. Additionally, the American Electric Power Co. feeds into the East Central Reliability Area which is interconnected in turn to another dozen utility areas throughout the nation.

The plant sites are located in coal producing areas estimated to have supplies adequate for the next 500 years. The Gavin Plant alone will burn approximately 25,000 tons a day.

The stators, the largest ever sent to the United States, together with their rotor shafts which are turned by a steam turbine can generate all electricity required by a country the size of Switzerland, with a population of six million, or a state the size of Massachusetts.

Seven more of the giant stators are to be delivered by Lykes. Bruno Voegele, traffic manager of Brown Boveri Corp. said two more will go to the Gavin Plant in Ohio, one will go to Bridgeman, Mich., two to the Tennessee Valley Authority at Bellafonte, Ala., and two to the Breed Plant near Terre Haute, Ind. □

HEAVY LIFT: A 600-ton floating crane lifts a stator from a barge at Avondale Shipyards in New Orleans.

The room is dimly lit, decidedly cool and quiet. As one becomes accustomed to the light, he can make out the shapes of men and women in military uniforms moving noiselessly over the thick carpet.

In the center of the room is a long table surrounded by three rows of comfortable looking chairs. On one side of this room is a semicircular ring of computer terminals, television screens, microphones, switches—and men in shirt sleeves. The walls of the room are battleship gray, with no adornments.

At precisely 8:30 a.m., a small side door opens admitting about 30 colonels, generals, admirals, and their staffs. All take their places at the table. The admiral heading the group leans toward a microphone mounted on the side of his chair and asks: "Display CONUS (Continental United States) please."

One portion of the large wall is suddenly illuminated with a map of the United States. Dark lines divide the various military service operating perimeters.

The admiral speaks into the microphone again. "General, how many tanks did you say you had to move to Bremerhaven and Rotterdam by the end of the month?"

"We've got 200, sir. We've already transported them by rail to Bayonne, N.J.," the general answers.

Another admiral sitting at the table breaks into the conversation. "We'll have a ship for that lift on berth by the end of the day admiral. Please display the MSC controlled fleet in the Atlantic."

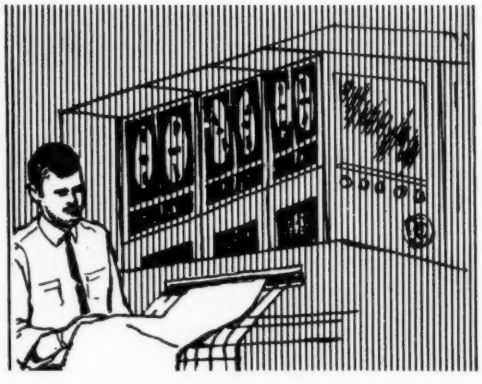
The Atlantic ocean area appears in perspective beside the map of the United States. Blue lights flash on the screen noting the 0800 position of each cargo ship operating under MSC, Atlantic and MSC, Eastern Atlantic and Mediterranean operational control.

"According to our morning DEPLOC (Daily Estimated Position Locator) the GTS Callaghan will be in Bayonne by 1600 tonight," said the second admiral. "She can commence loading tomorrow morning and can start her voyage on the 9th. Arrival time in Bremerhaven is estimated at 0400, 16 August, a full two weeks ahead of the general's deadline."

The Wonderful World

by

Ed Nurenberg



The above description of a hypothetical Pentagon meeting is not a movie scene. Nor is it something which happened at an actual meeting. But it soon will be possible to know where every Department of Defense ship is at any given time.

How? Worldwide Military Command and Control System (WWMCCS) which is scheduled to be operational by January 1974. MSC already is using a part of the system.

Since mid-summer, masters of government owned and MSC chartered ships have been making movement reports to meet standards required by the new MSC Movement Report System.

Arrival and departure reports, as well as diversions in course, weather changes and emergency conditions. are radioed to Movement Report Centers (MRCs) or Movement Report Offices (MROs).

For instance, when the USNS Eversail is west of Gibraltar and approaching Europe, the master's reports are received by the center in London, England.

From England, the information goes to U.S. Naval Forces Europe for further electronic transmission to CNO

# of WWMCCS

in Washington by AUDODIN (Automatic Digital Network).

When received by the computer facility in the Washington Navy Yard, the message is scanned electronically. That means radio operators must follow the reporting format exactly. Since each report is handled completely by machine from this point, a misplaced comma, or elimination of a slash could cause the optical scanner to reject the entire report.

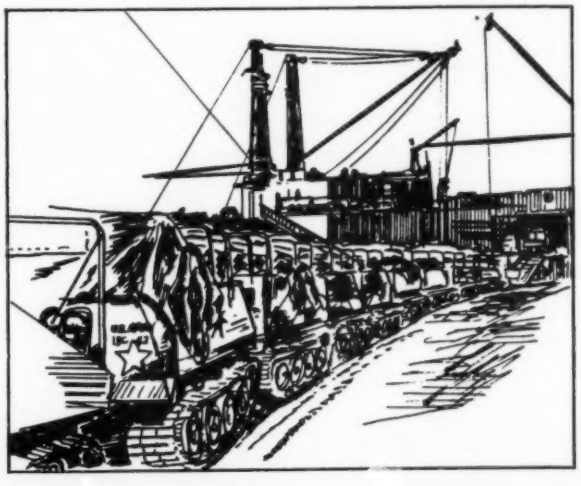
From the scanner, the information flows into the memory banks of a Honeywell 6050 or a 6070 computer. Each ship's position every eight hours, estimated time of arrival at a given point, and all other needed data are recorded on tape or disks ready for retrieval at the push of a button.

MSC headquarters eventually will have a remote terminal which will print out all information received at the Navy Yard in a matter of seconds. Quartermasters moving magnetic MSC controlled ships across a world map will find their plotting time greatly reduced.

Eventually every piece of major equipment owned or under contract to the Department of Defense will have a unit identification code. In this way, the JCS will be able to tell where every ship, tank, plane and even every Army battalion is located.

The code will be permanent for the life of the equipment. It is definitely possible that one day MSC will not only be able to tell the Army when a vessel can pick up tanks for sealift to Europe, but also the precise position on the ship that a tank will occupy, and how fast it can be taken off once the vessel ties up.

MSC was six months ahead of the January 1974 deadline in getting the new MSC movement report format approved and in use. In fact, MSC's reporting procedure has been provided, per request, to Iran which is establishing a similar reporting system for its own naval ships. □



If you're moving dry bulk material, Sea-Land can deliver

In the bag

by
Howard L. Rosenberg

In the movie *The Graduate*, an actor whose name escapes me, approaches Dustin Hoffman at a party and exhxorts him to get into the field that will insure a wealthy future. "Plastics Benjamin," he says, "plastics." Hoffman seemed a bit taken aback, but the actor's words actually rang of truth. It would seem that nearly every product of American technology somehow has plastics involved in its production or distribution.

Taken for granted by most people who use them every day, the plastic bag may well be one of the most useful products man has devised.

Plastic bags are used for almost everything under the sun, from carrying sandwiches to work, to disposal of waste from homes, schools, offices and factories. They are light, water-proof, sturdy and relatively inexpensive.

Every day people seem to find more uses for the ubiquitous plastic bag, and now, Sea-Land Service, Inc. has found yet another. What may well become a widely used packaging technique within the revolutionary container industry is Sea-Land's new SEA BULK[R] system.

Problems in shipping of dry, bulk goods have plagued the shipping industry for years. Normally, goods like chemicals, food stuffs, fertilizers, grains and fine powders are shipped in bags or steel drums, only partially protected from the elements. Millions of dollars are lost due to moisture seepage and contamination, either from the elements or the drum or bag. Use of plastic containers may overcome these problems and save money in other ways.

SEA BULK[R] is a glorified plastic bag which is hermetically sealed and fits into any of Sea-Land's more than 40,000 standard containers. It can be installed by two men in 10 minutes and is easily disposed of after use. No special equipment is needed for installation or removal. A user who normally ships other goods in containers would not be forced to look to paper bags or steel drums.

After the plastic sack is installed in the container, the product is pneumatically loaded. When the container reaches its destination its cargo is gravity discharged. Again, instead of the product being contained in a number of drums, it is moved in a single, watertight, contamination-proof package, substantially reducing total distribution costs.

The plastic container presently is being used by a varied list of shipping firms and corporations. Sea-Land sacks are carrying cement, corn starch, flour, grain, coffee, sugar and a number of dry chemicals, to name just a few. Other products are continually added to the list as people find out the economical and practical advantages of the plastic bag in shipping dry, bulk goods.

Possibilities for the plastic sack in movement of commercial and military cargo seem to be numerous. Department of Defense long has had a problem shipping commodities such as foodstuffs to troops based around the world—while keeping them contamination free.

Whole shipments have been ruined by chemical deposits within steel drums, or in containers previously used for other materials. Waste or loss while shipping large amounts of grain for foreign aid programs could be virtually eliminated by use of the plastic cargo sacks. Immediately coming to mind are newspaper accounts several years ago during a famine in India which reported that tons of wheat had been infested by rats while on the docks waiting for distribution to the Indian provinces.

That need not happen again. The system pioneered by Sea-Land would help insure product integrity, keeping cargo free of contamination from start to finish.

It's in the bag. □

INSTALLATION: Two men can install a sack in 10 minutes.

EASY FIT: The plastic sack can fit into any of Sea-Land's standard containers.

AT DESTINATION: The sack is gravity discharged.

Capt. George L. Hollinger, master of the Pacific Far East Line freighter Japan Bear, accepts the 1973 American Merchant Marine Seamanship Trophy from Thomas A. King, director of Maritime Administration's Eastern Region. Captain Hollinger was honored for outstanding seamanship during the rescue of 32 persons from a sinking Korean ship in the East China Sea.

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